Back to PALM ASSIGNMENT OASIS Home page

PALM INTRANET

Day : Thursday Date: 6/1/2006 Time: 11:41:30

Inventor Information for 10/724971

| Inventor Name | City | State/Country | | | | | | | |
|---|---------------|---------------|--|--|--|--|--|--|--|
| COURNOYER, RICHARD LEO | SAN FRANCISCO | CALIFORNIA | | | | | | | |
| LOUGHHEAD, DAVID GARRETT | BELMONT | CALIFORNIA | | | | | | | |
| O'YANG, COUNDE | SUNNYVALE | CALIFORNIA | | | | | | | |
| Appln Info Contents Petition Info Atty/Agent Info Continuity Data Foreign Data Search Another: Application# Search or Patent# Search PCT / / Search or PG PUBS # Search | | | | | | | | | |
| Attorney Docket# | Search | | | | | | | | |

http://expoweb1:8001/cgi-bin/expo/GenInfo/sninventors.pl?APPL_ID=10724971

10/724,971 Page 1

=> d l1 L1 HAS NO ANSWERS L1 STR

Structure attributes must be viewed using STN Express query preparation.

=> d his

L7

(FILE 'HOME' ENTERED AT 10:52:36 ON 01 JUN 2006)

FILE 'REGISTRY' ENTERED AT 10:52:48 ON 01 JUN 2006

L1 STRUCTURE UPLOADED

L2 17 S L1

L3 322 S L1 FUL

L4 265 S L3 AND CAPLUS/LC

L5 57 S L3 NOT L4

L6 0 S L5 AND CAOLD/LC

FILE 'CAPLUS' ENTERED AT 10:54:38 ON 01 JUN 2006 30 S L3

40/1/Db

ANSWER 10 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2005:158645 CAPLUS

DOCUMENT NUMBER:

142:261532

TITLE:

Preparation of benzoindazole compounds as gabanergic

modulators

INVENTOR(S):

Lin, Xiao-fa; Loughhead, David Garrett; Novakovic,

Sanja; O'Yang, Counde; Putman, David George; Soth,

Michael

PATENT ASSIGNEE(S):

F. Hoffmann-La Roche A.-G., Switz.

SOURCE:

PCT Int. Appl., 130 pp.

CODEN: PIXXD2 Patent

DOCUMENT TYPE: LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| I | PATENT NO. | | | | | KIND DATE | | | APPLICATION NO. | | | | | | | | | |
|--------|-----------------------|------|-----|-----|----------------------------|-----------|-----------------|----------------|-----------------|-----|------|------|------|-----|-----|-----|------|-----|
| - V | WO 2005016892 | | | | | | | WO 2004-EP8767 | | | | | | | | | | |
| | | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BW, | BY, | BZ, | CA, | CH, |
| | | | | | | | | | | | DZ, | | | | | | | |
| | | | GΕ, | GH, | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | ΚE, | KG, | KP, | KR, | ΚZ, | LC, |
| | | | | | | | | | | | MG, | | | | | | | |
| | | | NO, | NZ, | OM, | PG, | PH, | PL, | PT, | RO, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SY, |
| | | | | | | | | | | | | | | | | | | ZW |
| | | RW: | | | | | | | | | SD, | | | | | | | |
| | | | | | | | | | | | AT, | | | | | | | |
| | | | | | | | | | | | IT, | | | | | | | |
| | | | SI, | SK, | TR, | BF, | ВJ, | CF, | CG, | CI, | CM, | GA, | GN, | GQ, | GW, | ML, | MR, | ΝE, |
| | | | | TD, | | | | | | | | | | | | | | |
| | AU 2004265101 | | | | | | | | | | | | | | | | | |
| | | | | | | | CA 2004-2535406 | | | | | | | | | | | |
| I | EΡ | 1656 | | | | | | | | | EP 2 | | | | | | | |
| | | R: | | | | | | | | | GR, | | | | NL, | SE, | MC, | PT, |
| | | | | | | | | | | | EE, | | | | | | | |
| τ | US 2005101614 | | | A1 | A1 20050512 US 2004-916073 | | | | | | | | | | | | | |
| PRIOR | RIORITY APPLN. INFO.: | | | | | | | | US 2 | | | | | | | | | |
| | | | | | | | | | | | US 2 | | | | | | 0040 | |
| | | | | | | | | | | 1 | WO 2 | 004- | EP87 | 67 | 1 | W 2 | 0040 | 805 |
| OTHER | OTHER SOURCE(S): | | | | MAR | PAT | 142: | 2615 | 32 | | | | | | | | | |

OTHER SOURCE(S):

MARPAT 142:261532

$$\begin{bmatrix} R^4 \end{bmatrix}_{n = \frac{A^2}{A^1}} \xrightarrow{R^3}_{N} N - R^2$$

Title compds. I [R1 = alkynyl, haloalkyl, halo, etc.; R2 = H, alkyl, cycloalkyl, etc.; R3 = (un)substituted aryl, (un)substituted heteroaryl with alkyl, alkoxy, alkylthio, etc.; R4 = alkyl, alkoxy, haloalkyl, etc.; n = 0-p, where p = 3 minus the number of A1, A2 and A3 which are nitrogen; A1, A2, A3 = C, N with the proviso that at least one of A1, A2 and A3 is CH or CR4] and their pharmaceutically acceptable salts were prepared For example, bromination of 7-(2,4-dichlorophenyl)-2-methyl-2H-indazole afforded 3-bromo-7-(2,4-dichlorophenyl)-2-methyl-2H-indazole (II) in 62% yield. The exemplified compound II was tested in GABAA $\alpha1\beta2\gamma2$ binding assay, exhibited the pIC50 value of 6.24. Compds. I are claimed useful for the treatment of depression, convulsive disorder, etc. Formulations are given.

TT 701910-15-8P 701910-17-0P 701910-35-2P 845751-52-2P 845751-55-5P 845751-68-0P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of benzoindazole compds. as gabanergic modulators for treatment of depression, convulsive disorder, etc.)

RN 701910-15-8 CAPLUS

CN 2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA INDEX NAME)

RN 701910-17-0 CAPLUS

CN 2H-Indazole, 2-methyl-7-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

RN 701910-35-2 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 7-(2,4-dichlorophenyl)-2-methyl-, methyl

ester (9CI) (CA INDEX NAME)

RN 845751-52-2 CAPLUS CN 2H-Indazole-3-methanol, α ,2-dimethyl-7-(2,4,6-trimethylphenyl)-(9CI) (CA INDEX NAME)

RN 845751-55-5 CAPLUS CN 2H-Indazole-3-methanol, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA INDEX NAME)

RN 845751-68-0 CAPLUS CN 2H-Indazole, 7-(3,5-dichloro-2-pyridinyl)-2-methyl- (9CI) (CA INDEX NAME)

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701909-70-8P 701909-88-8P 701909-95-7P
IT
    701910-08-9P 701910-42-1P 845750-43-8P
    845750-45-0P 845750-47-2P 845750-48-3P
    845750-49-4P 845750-50-7P 845750-52-9P
    845750-53-0P 845750-55-2P 845750-56-3P
    845750-57-4P 845750-58-5P 845750-59-6P
    845750-61-0P 845750-62-1P 845750-63-2P
    845750-64-3P 845750-65-4P 845750-66-5P
    845750-67-6P 845750-68-7P 845750-69-8P
    845750-70-1P 845750-71-2P 845750-72-3P
     845750-73-4P 845750-74-5P 845750-75-6P
     845750-76-7P 845750-77-8P 845750-81-4P
     845750-82-5P 845750-84-7P 845750-86-9P
     845750-88-1P 845750-90-5P 845750-92-7P
     845750-94-9P 845750-96-1P 845750-98-3P
     845751-00-0P 845751-02-2P 845751-04-4P
     845751-06-6P 845751-07-7P 845751-09-9P
     845751-11-3P 845751-13-5P 845751-15-7P
     845751-17-9P 845751-19-1P 845751-20-4P
     845751-21-5P 845751-22-6P 845751-23-7P
     845751-24-8P 845751-25-9P 845751-26-0P
     845751-27-1P 845751-28-2P 845751-29-3P
     845751-30-6P 845751-31-7P 845751-32-8P
     845751-33-9P 845751-34-0P 845751-35-1P
     845751-36-2P 845751-37-3P 845751-38-4P
     845751-39-5P 845751-40-8P 845751-41-9P
     845751-42-0P 845751-43-1P 845751-44-2P
     845751-45-3P 845751-46-4P 845751-47-5P
     845751-48-6P 845751-49-7P 845751-50-0P
     845751-51-1P 845751-53-3P 845751-54-4P
     845751-56-6P 845751-57-7P 845751-58-8P
     845751-63-5P 845751-72-6P 845751-76-0P
     845751-85-1P 845751-89-5P 845751-99-7P
     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
```

(preparation of benzoindazole compds. as gabanergic modulators for treatment of depression, convulsive disorder, etc.)

RN 701909-70-8 CAPLUS

CN 2H-Indazol-3-amine, 7-(2,4-dichlorophenyl)-2-methyl-N,N-dipropyl-, monohydrochloride (9CI) (CA INDEX NAME)

HCl

RN 701909-88-8 CAPLUS

CN 2H-Indazole-3-carboxamide, N-(cyclopropylmethyl)-7-(2,4-dichlorophenyl)-2-methyl-N-propyl- (9CI) (CA INDEX NAME)

RN 701909-95-7 CAPLUS

CN 2H-Indazole-3-carboxamide, 7-(2,4-dichlorophenyl)-N,N-bis(2-methoxyethyl)-2-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 701909-94-6

CMF C21 H23 C12 N3 O3

76-05-1 CRN CMF C2 H F3 O2

701910-08-9 CAPLUS RN2H-Indazole-3-carboxamide, 7-(2,4-dichlorophenyl)-N,N-diethyl-2-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME) CN

CM

CRN 701910-07-8 CMF C19 H19 C12 N3 O

CRN 76-05-1 CMF C2 H F3 O2

701910-42-1 CAPLUS RN2H-Indazol-3-amine, 7-(2,4-dichlorophenyl)-2-methyl-N,N-dipropyl- (9CI) CN(CA INDEX NAME)

845750-43-8 CAPLUS 2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl-, monohydrochloride (9CI) RNCN (CA INDEX NAME)

HCl

10/724,5

RN 845750-45-0 CAPLUS
CN 2H-Indazole, 7-(2,4-dichlorophenyl)-2-(phenylmethyl)-,
mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-44-9 CMF C20 H14 Cl2 N2

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-47-2 CAPLUS
CN 2H-Indazole-2-acetic acid, 7-(2,4-dichlorophenyl)-, ethyl ester,
mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-46-1 CMF C17 H14 C12 N2 O2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-48-3 CAPLUS

CN Benzonitrile, 3-methyl-4-(2-methyl-2H-indazol-7-yl)- (9CI) (CA INDEX

RN 845750-49-4 CAPLUS

CN 2,1,3-Benzothiadiazole, 5,7-dimethyl-4-(2-methyl-2H-indazol-7-yl)- (9CI) (CA INDEX NAME)

Me

RN 845750-50-7 CAPLUS CN 2H-Indazole, 7-(3-chloro-2-pyridinyl)-2-methyl- (9CI) (CA INDEX NAME)

RN 845750-52-9 CAPLUS CN 2H-Indazole, 2-methyl-7-phenyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-51-8 CMF C14 H12 N2

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-53-0 CAPLUS CN 2H-Indazole, 7-[3-chloro-5-(trifluoromethyl)-2-pyridinyl]-2-methyl- (9CI) (CA INDEX NAME)

RN 845750-55-2 CAPLUS CN 2H-Indazole, 7-(6-methoxy-2-methyl-3-pyridinyl)-2-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-54-1 CMF C15 H15 N3 O

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-56-3 CAPLUS CN 3-Pyridinecarbonitrile, 2-(2-methyl-2H-indazol-7-yl)- (9CI) (CA INDEX NAME)

RN 845750-57-4 CAPLUS CN 2H-Indazole, 7-(3,5-dichloro-2-pyridinyl)-2-methyl-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 845750-58-5 CAPLUS CN 2H-Indazole, 7-(2,4-dichlorophenyl)-2,3-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)

HCl

RN 845750-59-6 CAPLUS CN 2H-Indazole, 2,3-dimethyl-7-(2,4,6-trimethylphenyl)-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 845750-61-0 CAPLUS
CN 2H-Indazole, 7-(2,4-dichlorophenyl)-2-ethyl-, mono(trifluoroacetate) (9CI)
(CA INDEX NAME)

CM 1

CRN 845750-60-9 CMF C15 H12 C12 N2 •

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-62-1 CAPLUS CN 2H-Indazole, 7-(2,4-dichlorophenyl)-3-ethenyl-2-methyl- (9CI) (CA INDEX NAME)

$$C1$$
 N
 N
 Me
 CH
 CH
 CH

RN 845750-63-2 CAPLUS CN 2H-Indazole, 3-ethenyl-2-methyl-7-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

845750-64-3 CAPLUS RN

2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl-3-[(1E)-1-propyl-1-butenyl]-, CN monohydrochloride (9CI) (CA INDEX NAME)

Double bond geometry as shown.

HCl

845750-65-4 CAPLUS RN

2H-Indazole, 7-(2,4-dichlorophenyl)-3-ethynyl-2-methyl- (9CI) (CA INDEX CN NAME)

845750-66-5 CAPLUS RN2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl-3-(2-propenyl)- (9CI) (CA CN INDEX NAME)

$$C1$$
 N
 Me
 $CH_2-CH=CH_2$

845750-67-6 CAPLUS RN 2H-Indazole-3-carboxaldehyde, 7-(2,4-dichlorophenyl)-2-methyl-, CNO-methyloxime (9CI) (CA INDEX NAME)

845750-68-7 CAPLUS RNEthanone, 1-[2-methyl-7-(2,4,6-trimethylphenyl)-2H-indazol-3-yl]- (9CI) CN(CA INDEX NAME)

845750-69-8 CAPLUS RN2H-Indazole, 3-chloro-2-methyl-7-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX CN NAME)

845750-70-1 CAPLUS RN2H-Indazole, 3-chloro-7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA INDEX CN NAME)

845750-71-2 CAPLUS RN 2H-Indazole, 3-bromo-2-methyl-7-(2,4,6-trimethylphenyl)-, CN monohydrochloride (9CI) (CA INDEX NAME)

HCl

RN 845750-72-3 CAPLUS 2H-Indazole, 3-bromo-7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA INDEX CN NAME)

RN 845750-73-4 CAPLUS 2H-Indazole-3-acetonitrile, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA CN INDEX NAME)

$$C1$$
 N
 N
 N
 CH_2-CN

RN 845750-74-5 CAPLUS

2H-Indazole-3-carbonitrile, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA CN INDEX NAME)

845750-75-6 CAPLUS RN

2H-Indazole, 7-(3,5-dichloro-2-pyridinyl)-2,3-dimethyl- (9CI) (CA INDEX CN NAME)

845750-76-7 CAPLUS RN

2H-Indazole, 3-chloro-7-(3,5-dichloro-2-pyridinyl)-2-methyl- (9CI) (CA CNINDEX NAME)

RN 845750-77-8 CAPLUS

CN 2H-Indazole, 3-bromo-7-(3,5-dichloro-2-pyridinyl)-2-methyl- (9CI) (CA INDEX NAME)

RN 845750-81-4 CAPLUS

CN Carbamic acid, [7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-5-yl]-, methyl ester, monohydrochloride (9CI) (CA INDEX NAME)

HCl

RN 845750-82-5 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 7-(2,4-dichlorophenyl)-2-ethyl-, methyl ester (9CI) (CA INDEX NAME)

RN 845750-84-7 CAPLUS

2H-Indazole-3-carboxylic acid, 7-(3-methoxyphenyl)-2-methyl-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME) CN

CM1

CRN 845750-83-6 CMF C17 H16 N2 O3

2 CM

CRN 76-05-1 CMF C2 H F3 O2

845750-86-9 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 2-methyl-7-(2-phenoxyphenyl)-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-85-8 CMF C22 H18 N2 O3

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-88-1 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 2-methyl-7-(3-methylphenyl)-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-87-0 CMF C17 H16 N2 O2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-90-5 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 7-(3,5-dimethylphenyl)-2-methyl-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-89-2 CMF C18 H18 N2 O2

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-92-7 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 7-(6-methoxy-2-methyl-3-pyridinyl)-2-methyl-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-91-6 CMF C17 H17 N3 O3

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845750-94-9 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 7-(2,5-dimethoxyphenyl)-2-methyl-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

845750-93-8 CRN CMF C18 H18 N2 O4

2 CM

CRN 76-05-1 CMF C2 H F3 O2

845750-96-1 CAPLUS RN

2H-Indazole-3-carboxylic acid, 2-methyl-7-(4-phenoxyphenyl)-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME) CN

CM 1

CRN 845750-95-0 CMF C22 H18 N2 O3

CRN 76-05-1 CMF C2 H F3 O2

CN

RN845750-98-3 CAPLUS

CM 1

CRN 845750-97-2 CMF C14 H12 N2 O2 S

CM 2 CRN 76-05-1 CMF C2 H F3 O2

RN845751-00-0 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 7-(3-furanyl)-2-methyl-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845750-99-4 CMF C14 H12 N2 O3

CM2

CRN 76-05-1 CMF C2 H F3 O2

845751-02-2 CAPLUS RN

2H-Indazole-3-carboxylic acid, 7-(2,4-dimethoxyphenyl)-2-methyl-, methyl CNester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM

CRN 845751-01-1 CMF C18 H18 N2 O4

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN845751-04-4 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 2-methyl-7-[4-(1-methylethyl)phenyl]-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845751-03-3 CMF C19 H20 N2 O2

CRN 76-05-1 CMF C2 H F3 O2

CN

RN 845751-06-6 CAPLUS

2H-Indazole-3-carboxylic acid, 7-(2,5-dichlorophenyl)-2-methyl-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM1

CRN 845751-05-5

CMF C16 H12 C12 N2 O2

CRN 76-05-1 CMF C2 H F3 O2

845751-07-7 CAPLUS RN

2H-Indazole-3-carboxylic acid, 7-(2,4-dichlorophenyl)-2-methyl-, methyl CNester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM1

701910-35-2 CRN

CMF C16 H12 C12 N2 O2

2 CM

CRN 76-05-1 CMF C2 H F3 O2

RN845751-09-9 CAPLUS

2H-Indazole-3-carboxylic acid, 7-(2,4-dichlorophenyl)-2-methyl-, CN

1-(cyclopropylmethyl)-2-ethylhydrazide, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845751-08-8 CMF C21 H22 C12 N4 O

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845751-11-3 CAPLUS

CN 2H-Indazole-3-carboxamide, 7-(2,4-dichlorophenyl)-N-ethyl-2-methyl-N-propyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845751-10-2 CMF C20 H21 C12 N3 O

CRN 76-05-1 CMF C2 H F3 O2

RN845751-13-5 CAPLUS

2H-Indazole-3-carboxamide, 7-(2,4-dichlorophenyl)-2-methyl-N,N-dipropyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME) CN

CM1

CRN 845751-12-4 CMF C21 H23 C12 N3 O

CRN 76-05-1 CMF C2 H F3 O2

RN 845751-15-7 CAPLUS

CN 2H-Indazole-3-carboxamide, 7-(2,4-dichlorophenyl)-N-ethyl-N-(2-methoxyethyl)-2-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845751-14-6 CMF C20 H21 Cl2 N3 O2

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845751-17-9 CAPLUS

CN 2H-Indazole-3-carboxamide, 7-(2,4-dichlorophenyl)-N,N,2-trimethyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845751-16-8 CMF C17 H15 C12 N3 O

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845751-19-1 CAPLUS

CN Pyrrolidine, 1-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]carbonyl]-2-(methoxymethyl)-, (2S)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 845751-18-0

CMF C21 H21 C12 N3 O2

Absolute stereochemistry.

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 845751-20-4 CAPLUS

CN 2H-Indazole-3-carboxamide, 7-(2,4-dichlorophenyl)-N,2-dimethyl- (9CI) (CA INDEX NAME)

RN 845751-21-5 CAPLUS

CN 2H-Indazole-3-carboxamide, N-(cyclopropylmethyl)-7-(2,4-dichlorophenyl)-2-

methyl-N-propyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 701909-88-8 CMF C22 H23 C12 N3 O

2 CM

CRN 76-05-1 C2 H F3 O2 CMF

845751-22-6 CAPLUS RN

CN 2H-Indazole-3-carboxamide, 7-(2,4-dichlorophenyl)-2-ethyl-N-methyl- (9CI) (CA INDEX NAME)

RN 845751-23-7 CAPLUS

2H-Indazol-3-amine, 7-(4-methoxy-2-methylphenyl)-N,N,2-trimethyl-, CN monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN845751-24-8 CAPLUS CN 2H-Indazole-3-methanamine, 7-(2,4-dichlorophenyl)-N,N,2-trimethyl- (9CI) (CA INDEX NAME)

RN845751-25-9 CAPLUS

CN 2H-Indazole-3-methanamine, 7-(2,4-dichlorophenyl)-N,2-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)

HCl

RN845751-26-0 CAPLUS

2H-Indazol-3-amine, N,N,2-trimethyl-7-(2,4,6-trimethylphenyl)-, monohydrochloride (9CI) (CA INDEX NAME) CN

HCl

RN845751-27-1 CAPLUS

Acetamide, N-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]methyl]-N-CN methyl-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 845751-28-2 CAPLUS

CN 2H-Indazole, 7-(2,4-dichlorophenyl)-3-(hydrazinomethyl)-2-methyl-, monohydrochloride (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{C1} \\ \\ \text{N} \\ \\ \text{N} \\ \\ \text{CH}_2-\text{NH}-\text{NH}_2 \\ \end{array}$$

● HCl

RN 845751-29-3 CAPLUS

CN Methanimidamide, N'-[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]-N,N-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 845751-30-6 CAPLUS

CN Carbamic acid, [[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]methyl]-, methyl ester, monohydrochloride (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{C1} \\ \\ \text{N} \\ \text{N} \\ \text{CH}_2-\text{NH-C-OMe} \end{array}$$

● HCl

RN 845751-31-7 CAPLUS

CN Imidodicarbonic acid, [7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]-, dimethyl ester, monohydrochloride (9CI) (CA INDEX NAME)

HCl

RN 845751-32-8 CAPLUS

CN 4-Morpholinecarboxamide, N-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]methyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ \hline & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

RN 845751-33-9 CAPLUS

CN Carbamic acid, [7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]-, methyl ester (9CI) (CA INDEX NAME)

845751-34-0 CAPLUS RN

Urea, N'-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]methyl]-N,N-CN dimethyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{C1} \\ \\ \text{C1} \\ \\ \text{N} \\ \\ \text{N} \\ \\ \text{Me} \\ \\ \text{CH}_2-\text{NH}-\text{C}-\text{NMe}_2 \\ \end{array}$$

845751-35-1 CAPLUS RN

Urea, [7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]- (9CI) (CA INDEX CN NAME)

RN845751-36-2 CAPLUS

Urea, N'-[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]-N,N-dimethyl-CN (9CI) (CA INDEX NAME)

RN

845751-37-3 CAPLUS 2H-Indazole, 3-(ethylsulfonyl)-2-methyl-7-(2,4,6-trimethylphenyl)- (9CI) CN (CA INDEX NAME)

845751-38-4 CAPLUS RN

CN2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl-3-(methylsulfonyl)- (9CI) (CA INDEX NAME)

845751-39-5 CAPLUS RN

2H-Indazole-3-sulfonamide, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA CN INDEX NAME)

RN845751-40-8 CAPLUS CN Ethanol, 2-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]thio]- (9CI) (CA INDEX NAME)

$$C1$$
 N
 N
 Me
 $S-CH_2-CH_2-OH$

845751-41-9 CAPLUS RNEthanol, 2-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]sulfonyl]-CN (9CI) (CA INDEX NAME)

RN 845751-42-0 CAPLUS CN 2H-Indazole-3-sulfonamide, 7-(2,4-dichlorophenyl)-N-(2-hydroxyethyl)-2-methyl- (9CI) (CA INDEX NAME)

RN 845751-43-1 CAPLUS

CN 2H-Indazole-3-sulfonamide, 7-(2,4-dichlorophenyl)-N-(2-methoxyethyl)-2-methyl- (9CI) (CA INDEX NAME)

RN 845751-44-2 CAPLUS

CN 2H-Indazole-3-sulfonamide, 7-(2,4-dichlorophenyl)-N,N,2-trimethyl- (9CI) (CA INDEX NAME)

RN845751-45-3 CAPLUS CN 2H-Indazole-3-sulfonamide, 7-(2,4-dichlorophenyl)-N,2-dimethyl- (9CI) (CA INDEX NAME)

845751-46-4 CAPLUS RNMorpholine, 4-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]sulfonyl]-CN(9CI) (CA INDEX NAME)

RN

845751-47-5 CAPLUS
Piperazine, 1-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]sulfonyl]-CN 4-methyl- (9CI) (CA INDEX NAME)

845751-48-6 CAPLUS RN

2H-Indazole-3-sulfonamide, 7-(2,4-dichlorophenyl)-N,N-bis(2-hydroxyethyl)-CN 2-methyl- (9CI) (CA INDEX NAME)

845751-49-7 CAPLUS RN

2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl-3-[(methylsulfonyl)methyl]-CN (9CI) (CA INDEX NAME)

RN845751-50-0 CAPLUS CN2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl-3-(methylsulfinyl)- (9CI) (CA INDEX NAME)

RN845751-51-1 CAPLUS CN Methanesulfonamide, N-[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]-(9CI) (CA INDEX NAME)

845751-53-3 CAPLUS RN

2H-Indazole, 7-(2,4-dichlorophenyl)-3-[(2-methoxyethoxy)methyl]-2-methyl-, CN monohydrochloride (9CI) (CA INDEX NAME)

$$C1$$
 N
 Me
 $CH_2-O-CH_2-CH_2-OMe$

HCl

RN 845751-54-4 CAPLUS 2H-Indazole, 7-(2,4-dichlorophenyl)-3-(methoxymethyl)-2-methyl- (9CI) (CA CN

INDEX NAME)

RN845751-56-6 CAPLUS

2H-Indazole-3-methanol, 7-(2,4-dichlorophenyl)-2-methyl-, acetate (ester) CN (9CI) (CA INDEX NAME)

845751-57-7 CAPLUS RN

Carbamic acid, dimethyl-, [7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-CNyl]methyl ester (9CI) (CA INDEX NAME)

RN 845751-58-8 CAPLUS

2H-Indazole-3-methanol, 7-(2,4-dichlorophenyl)-2-methyl-, carbamate CN (ester) (9CI) (CA INDEX NAME)

$$C1$$
 N
 Me
 $CH_2-O-C-NH_2$

RN845751-63-5 CAPLUS

CN 2H-Indazole, 2,3-dimethyl-7-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

RN 845751-72-6 CAPLUS CN 2H-Indazole, 3-ethynyl-2-methyl-7-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

RN 845751-76-0 CAPLUS
CN 2H-Indazole-3-carboxylic acid, 7-(2,4-dichlorophenyl)-2-methyl-,
1-(cyclopropylmethyl)-2-ethylhydrazide, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 845751-85-1 CAPLUS

Acetamide, N-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]methyl]-N-CN methyl- (9CI) (CA INDEX NAME)

RN 845751-89-5 CAPLUS

CN 2H-Indazole, 7-(2,4-dichlorophenyl)-3-(hydrazinomethyl)-2-methyl-, dihydrochloride (9CI) (CA INDEX NAME)

●2 HCl

RN 845751-99-7 CAPLUS

CNCarbamic acid, [7-(2,4-dichlorophenyl)-2,3-dimethyl-2H-indazol-5-yl]-, methyl ester, monohydrochloride (9CI) (CA INDEX NAME)

HCl

IT 845751-74-8 845752-10-5

RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of benzoindazole compds. as gabanergic modulators for treatment of depression, convulsive disorder, etc.)

RN 845751-74-8 CAPLUS

CN 2H-Indazole, 3-(ethylthio)-2-methyl-7-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

RN 845752-10-5 CAPLUS

CN 2H-Indazole-3-carboxylic acid, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA INDEX NAME)

ΙT 701910-20-5P 701910-21-6P 701910-22-7P 701910-23-8P 845751-71-5P 845751-77-1P 845751-83-9P 845751-84-0P 845751-86-2P 845751-87-3P 845751-88-4P 845751-90-8P 845751-95-3P 845751-96-4P 845751-97-5P 845751-98-6P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of benzoindazole compds. as gabanergic modulators for treatment of depression, convulsive disorder, etc.) RN 701910-20-5 CAPLUS 2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl-3-nitro- (9CI) (CA INDEX CN NAME)

RN701910-21-6 CAPLUS CN 2H-Indazol-3-amine, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA INDEX

RN 701910-22-7 CAPLUS Propanamide, N-[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]- (9CI) CN (CA INDEX NAME)

RN701910-23-8 CAPLUS CN 2H-Indazol-3-amine, 7-(2,4-dichlorophenyl)-2-methyl-N-propyl- (9CI) (CA INDEX NAME)

845751-71-5 CAPLUS RN2H-Indazole-3-carboxaldehyde, 2-methyl-7-(2,4,6-trimethylphenyl)- (9CI) CN (CA INDEX NAME)

845751-77-1 CAPLUS RN2H-Indazole-3-carboxylic acid, 7-(2,4-dichlorophenyl)-2-methyl-, CN1-(cyclopropylmethyl)-2-[(1,1-dimethylethoxy)carbonyl]-2-ethylhydrazide (9CI) (CA INDEX NAME)

RN845751-83-9 CAPLUS 2H-Indazole, 3-(bromomethyl)-7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA CN INDEX NAME)

RN 845751-84-0 CAPLUS CN Carbamic acid, [7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 845751-86-2 CAPLUS

CN 2H-Indazole-3-carboxaldehyde, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA INDEX NAME)

RN 845751-87-3 CAPLUS

CN 2H-Indazole-3-methanamine, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA INDEX NAME)

$$C1$$
 N
 Me
 CH_2-NH_2

RN 845751-88-4 CAPLUS

CN Hydrazinecarboxylic acid, 2-[[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

845751-90-8 CAPLUS RN

Hydrazinecarboxylic acid, [[7-(2,4-dichlorophenyl)-2-methyl-2H-indazol-3-yl]methylene]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME) CN

RN 845751-95-3 CAPLUS

2H-Indazole-3-sulfinic acid, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) (CA CN INDEX NAME)

845751-96-4 CAPLUS RN

2H-Indazole-3-sulfonyl chloride, 7-(2,4-dichlorophenyl)-2-methyl- (9CI) CN(CA INDEX NAME)

845751-97-5 CAPLUS RN 2H-Indazole, 7-(2,4-dichlorophenyl)-2-methyl-3-[(methylthio)methyl]- (9CI) CN (CA INDEX NAME)

RN845751-98-6 CAPLUS 2H-Indazole, 7-(2,4-dichlorophenyl)-2,3-dimethyl-5-nitro- (9CI) (CA INDEX CN NAME)

REFERENCE COUNT:

4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 16 OF 30 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2004:308422 CAPLUS

DOCUMENT NUMBER:

140:339323

TITLE:

Preparation of substituted 4-(indazol-3-yl)phenols as

estrogen receptor (ER) ligands for treatment of

inflammatory diseases

INVENTOR(S):

Steffan, Robert John; Matelan, Edward Martin; Ashwell,

Mark Anthony; Solvibile, William Ronald

PATENT ASSIGNEE(S):

Wyeth, John, and Brother Ltd., USA

SOURCE:

GI

PCT Int. Appl., 135 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PA' | PATENT NO. | | | | | | DATE | | APPLICATION NO. | | | | | DATE | | | | | |
|----------|-----------------------|-----|-----|-----|-----|-------------|------|-------|-----------------|---------------|--------------|-------|----------|------|----------|-------|-----|--|--|
| WO | WO 2004031159 | | | | | A1 2004 | | | | WO 2 | 2003-US30252 | | | | 20030924 | | | | |
| | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BY, | BZ, | CA, | CH, | CN, | | |
| | | | | | | | DK, | | | | | | | | | | - | | |
| | | GH, | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KZ, | LC, | LK, | | |
| | | | | | | | MA, | | | | | | | | | | | | |
| | | | | | | | RO, | | | | | | | | | | | | |
| | | TN, | TR, | TT, | TZ, | UA, | UG, | US, | UΖ, | VC, | VN, | YU, | ZA, | ZM, | ZW | • | | | |
| | RW: | GH, | GM, | ΚE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | ŪĠ, | ZM, | ZW, | AM, | AZ, | BY, | | |
| | | KG, | ΚZ, | MD, | RU, | TJ, | TM, | ΑT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | EE, | ES, | | |
| | | FI, | FR, | GB, | GR, | HU, | IE, | IT, | LU, | MC, | NL, | PT, | RO, | SE, | SI, | SK, | TR, | | |
| | | | | | | | CM, | | | | | | | | | | | | |
| CA | CA 2499736 | | | | | AA 20040415 | | | | CA 2 | 003- | 2499 | 20030924 | | | | | | |
| | AU 2003276940 | | | | | | | | | | | | 20030924 | | | | | | |
| | US 2004167127 | | | | | | | | | | | | | | | | | | |
| EP | EP 1542976 | | | | | | | | | | | | | | | | | | |
| | R: | | | | | | ES, | | | | | | | | | | PT, | | |
| | | | | | | | RO, | MK, | CY, | ΑL, | TR, | BG, | CZ, | EE, | HU, | SK | | | |
| | BR 2003014475 | | | | | | | | | BR 2003-14475 | | | | | | | | | |
| | JP 2006505544 | | | | | | | | | | | | | | | | | | |
| | NO 2005001942 | | | | | | 2005 | 0614 | 1 | NO 2 | 005- | 1942 | | | 2 | 00504 | 420 | | |
| PRIORIT | RIORITY APPLN. INFO.: | | | | | , | | | 1 | US 2 | 002- | 4139 | 31P | I | P 2 | 0020 | 925 | | |
| | | | | | | | | | | WO 2 | 003-1 | US30: | 252 | V | √ 2 | 0030 | 924 | | |
| OTHER SO | THER SOURCE(S): | | | | | TAS | 140: | 33932 | 23 | | | | | | | | | | |

Page 1

Ι

Title compds. I and II [wherein R1 = H, (cyclo)alkyl, (cyclo)alkenyl, AB aryl(alkyl), or heterocyclyl; R2-R5 = independently H, alkyl, alkenyl, OH, alkoxy, aryloxy, halo, CF3, CN, NO2, CHO, or CO2R11; R6-R9 = independently H, alkyl, alkenyl, OH, alkoxy, aryloxy, halo, CF3, CO2R11, aryl(alkyl), or heterocyclyl; R10 = H, COR11, CONHR11, P(O)(OH)OR11, or CO(CH2)nCH(NHR12)CO2R11; R11 = H, alkyl, or aryl(alkyl); R12 = H orCO2R11; n = 0-3; and pharmaceutically acceptable salts thereof] were prepared as antiinflammatory agents. For example, condensation of 2,2',4,4'-tetrahydroxybenzophenone with propylhydrazine oxalate using NaOAc in MeOH provided 4-(6-hydroxy-1-propyl-1H-indazol-3-yl)benzene-1,3diol (III). Compds. of the invention potently and efficaciously inhibited transcription factor nuclear factor κB (NF-κB) and interleukin 6 (IL-6) expression in $ER\alpha$ infected immortalized human aortic endothelial (HAECT-1) cells (IC50 values about 1 nM) without inducing creatinine kinase (CK) expression in an ER-dependent manner, demonstrating antiinflammatory activity in the absence of classic estrogenic activity. Thus, I, II, and their pharmaceutical compns. are useful for the treatment of the inflammatory component of diseases and are particularly useful in treating atherosclerosis, myocardial infarction, conqestive heart failure, inflammatory bowel disease, arthritis, type II diabetes, and autoimmune diseases, such as multiple sclerosis and rheumatoid arthritis (no data). IT 680612-81-1P, 4-(7-Phenyl-2-propyl-2H-indazol-3-yl)phenol RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(ER ligand; preparation of indazolylphenols as ER ligands for treatment of inflammatory diseases)

RN 680612-81-1 CAPLUS

CN Phenol, 4-(7-phenyl-2-propyl-2H-indazol-3-yl)- (9CI) (CA INDEX NAME)

IT 680612-82-2P, 3-(4-Methoxyphenyl)-7-phenyl-2-propyl-2H-indazole

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(intermediate; preparation of indazolylphenols as ER ligands for treatment of inflammatory diseases)

of inflammatory diseases)

RN 680612-82-2 CAPLUS

CN 2H-Indazole, 3-(4-methoxyphenyl)-7-phenyl-2-propyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 17 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN

2002:31439 CAPLUS ACCESSION NUMBER:

136:102401 DOCUMENT NUMBER:

Preparation of pyrazinone derivatives as Cdk4 and Cdk6 TITLE:

inhibiting anticancer agents

Hayama, Takashi; Kawanishi, Nobuhiko; Takaki, Tooru INVENTOR(S):

Banyu Pharmaceutical Co., Ltd., Japan PATENT ASSIGNEE(S):

PCT Int. Appl., 162 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PA' | PATENT NO. | | | | | | DATE | | APPLICATION NO. | | | | | DATE | | | | |
|---------|-----------------------|-----|-----|-----|-----|---------------|------------|------|-----------------|-----------------|-------|------|----------|----------|----------|------|-----|--|
| WO | WO 2002002550 | | | | | _ | 20020110 | | WO 2001-JP5545 | | | | | 20010628 | | | | |
| | W: | AE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BY, | BZ, | CA, | CH, | CN, | |
| | | CR, | CU, | CZ, | DE, | DK | DM, | DZ, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | GM, | HR, | |
| | | HU, | ID, | IL, | IN, | IS | JP, | KE, | KG, | KP, | KR, | KZ, | LC, | LK, | LR, | LS, | LT, | |
| | | | | | | | MK, | | | | | | | | | | | |
| | | | | | | | SL, | | | | | | | | | | | |
| | | ΥU, | ZA, | ZW, | AM, | AZ | BY, | KG, | KZ, | MD, | RU, | ТJ, | TM | | | | | |
| | RW: | GH, | GM, | KE, | LS, | MW | MZ, | SD, | SL, | SZ, | TZ, | ŪĠ, | ZW, | AT, | BE, | CH, | CY, | |
| | | DE, | DK, | ES, | FI, | FR | GB, | GR, | ΙE, | IT, | LU, | MC, | NL, | PT, | SE, | TR, | BF, | |
| | | ВJ, | CF, | CG, | CI, | CM, | GA, | GN, | GW, | ML, | MR, | NE, | SN, | TD, | TG | | | |
| AU | 2001 | | | | | AU 2001-67852 | | | | | | | | | | | | |
| CA | CA 2413002 | | | | | AA 20021219 | | | | CA 2001-2413002 | | | | | 20010628 | | | |
| | EP 1295878 | | | | | | | | | | 2001- | 9456 | 20010628 | | | | | |
| EP | 1295878 | | | | | | | | | | | | | | | | | |
| | R: | | | | | | ES, | | | | | LI, | LU, | NL, | SE, | MC, | PT, | |
| | | • | SI, | LT, | LV, | FI, | RO, | | | • | | | | | | | | |
| | | | | | | | | | | | | | 20010628 | | | | | |
| | | | | | | | | | | | | | 20010628 | | | | | |
| | US 2003203907 | | | | | | | | | US 2003-312500 | | | | | 20030131 | | | |
| | US 6914062 | | | | | | | | | | | | | | | | | |
| | US 2005176719 | | | | | | 2005 | 0811 | | US 2 | 2005- | 1055 | 34 | | 2 | 0050 | 414 | |
| PRIORIT | RIORITY APPLN. INFO.: | | | | | | | | | JP 2 | 2000- | 2002 | 92 | 1 | A 2 | 0000 | 630 | |
| | | | | | | | | | | | 2001- | | | | _ | 0010 | | |
| | | | | | | | | | | US 2 | 003- | 3125 | 00 | 7 | A3 2 | 0030 | 131 | |
| OTHER S | THER SOURCE(S): | | | | | | 136:102401 | | | | | | | | | | | |

GI

AB The title compds. I [A = (W)n; Ar is aryl fused to the adjacent pyrazinone

Ι

ring at its 5- and 6-positions, or the like; X is CO or the like; Y is CH or the like; Z is CH or the like; V is CH or the like; Wn is (CH2)n (wherein n is 0 to 4); R1 is hydrogen, optionally substituted lower alkyl, or the like; R2 is hydrogen or the like; R3 and R4 are each independently hydrogen or the like; and R5 and R6 are each independently hydrogen, hydroxyl, or the like] are prepared Processes for preparing I are claimed. 9-(3-Oxo-3,4-dihydroquinoxalin-2-yl)-1,2,3,9b-tetrahydro-5H-pyrrolo[2,1-a]isoindol-5-one in vitro showed IC50 of 0.3 μM against T98G cells, resp.

IT 388611-61-8P 388611-62-9P 388611-63-0P 388611-64-1P 388612-50-8P 388612-52-0P 388612-54-2P 388612-56-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of pyrazinone derivs. as Cdk4 and Cdk6 inhibiting anticancer agents)

RN 388611-61-8 CAPLUS

CN 2(1H)-Quinoxalinone, 3-(2,3-dihydro-3-oxo-1H-indazol-7-yl)- (9CI) (CA INDEX NAME)

RN 388611-62-9 CAPLUS

CN 2(1H)-Quinoxalinone, 3-[2-(2-cyclohexen-1-yl)-2,3-dihydro-3-oxo-1H-indazol-7-yl]- (9CI) (CA INDEX NAME)

RN 388611-63-0 CAPLUS

CN 2(1H)-Quinoxalinone, 3-(2,3-dihydro-2-methyl-3-oxo-1H-indazol-7-yl)- (9CI) (CA INDEX NAME)

RN 388611-64-1 CAPLUS
CN 2(1H)-Quinoxalinone, 3-[2,3-dihydro-3-oxo-2-(phenylmethyl)-1H-indazol-7-yl]- (9CI) (CA INDEX NAME)

RN 388612-50-8 CAPLUS CN 2(1H)-Quinoxalinone, 3-(2-cyclopentyl-2,3-dihydro-3-oxo-1H-indazol-7-yl)-5-hydroxy- (9CI) (CA INDEX NAME)

RN 388612-52-0 CAPLUS CN 2(1H)-Quinoxalinone, 3-(2,3-dihydro-2-methyl-3-oxo-1H-indazol-7-yl)-5-hydroxy- (9CI) (CA INDEX NAME)

RN 388612-54-2 CAPLUS

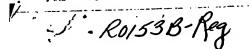
CN 2(1H)-Quinoxalinone, 3-(2,3-dihydro-2-methyl-3-oxo-1H-indazol-7-yl)-5-(hydroxymethyl)- (9CI) (CA INDEX NAME)

RN 388612-56-4 CAPLUS

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REFERENCE COUNT:

THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT





ELECTROCHEMICAL FORMATION OF INDAZOLES FROM TROPONE TOSYLHYDRAZONES:
ELECTROCHEMICAL OXIDATIONS OF SODIUM SALTS OF TOSYLHYDRAZONES OF
TROPONE AND 2-PHENYLTROPONE

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Abstract — Electrochemical oxidations of the sodium salts of tropone and 2-phenyltropone tosylhydrazones afforded 2-tosyl-2H-indazole and 1-tosyl-7-phenyl-1H-indazole, respectively. The reactions proceeded through the cyclizations of the corresponding hydrazyl radicals generated by electrochemical one electron oxidations of the hydrazone anions.

Much attention has been paid to electrochemical reactions of organic compounds not only from the viewpoint of synthetic utilities but also from elucidation of the reaction mechanisms.¹ The electrochemical reactions of nitrogen atom-containing compounds such as amines, imines, and hydroxylamines have been revealed to proceed mainly through one electron oxidation of the lone pair electrons on the nitrogen atoms.² There is, however, a paucity on the papers dealing with the electrochemical reactions of hydrazones. And it is hard to find any document except for the electrochemical dimerization through cation radicals formed by one electron oxidation.³

la: R=H b: R=Ph

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Sodium salts of tropone tosylhydrazones (1) are known to generate cyclic carbenes (cycloheptatrienylidene) or cyclic allenes (cycloheptatetraene) and their thermal and photochemical reactivities have been elucidated in very detail. 4, 5 However, we are unaware of any work concerning the electrochemical reactivities of these hydrazones. As a part of a series of our researches on the reactivities of tosylhydrazones, 5-7 we investigated into the electrochemical oxidation reactions of the sodium salts of tropone tosylhydrazones (1) affording indazole derivatives. The results are reported herein.

A solution of tropone tosylhydrazone sodium salt (1a) in anhydrous N,N-dimethyl-formamide (DMF) was electrolyzed in the presence of tetrabutylammonium perchrolate as a supporting electrolyte with a platinum wire as a cathode, a platinum gauze as an anode, and a silver wire as a reference electrode at + 0.6 V at room temperature under a nitrogen stream. After evaporation of the solvent under a reduced pressure, the reaction mixture was chromatographed on silica gel to give 2-tosyl-2H-indazole (2a) in 28% yield. A similar reaction on 2-phenyl-tropone tosylhydrazone sodium salt (1b)⁸ at +1.1 V afforded 1-tosyl-7-phenyl-1H-indazole (3b) in 17% yield.

The structure of 2a was determined by the coincidence of the spectral properties and melting point to those of the authentic sample. The structure of 3b was also determined by the coincidence of it's melting point and spectral properties to those of the authentic sample, which was synthesized from 2-phenylcyclo-exanone (4) via 2-oxo-3-phenylcyclohexanonecarbaldehyde (5), 4,5,6,7-tetraydro-7-phenyl-1<u>H</u>-indazole (6), and 7-phenyl-1<u>H</u>-indazole (7).

The formation of 2 can be speculated to proceed as follows. Electrochemical one electron oxidation of 1 forms a hydrazyl radical (8), which cyclized to give a cycloheptatriene-type intermediate (9). The ionic form (8B) is thought to contribute to this cyclization process through an interaction between the counter electric charges. A norcaradiene-type valence tautomer (10) openes its cyclopropane ring forming 2.7,11

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EXPERIMENTAL

The anode was a platinum gauze of a size of 5 cm depth and 12 cm width which was separated from the cathode compartment by means of a medium-porosity sintered glass frit. The cathode was a platinum wire and the reference electrode was a silver wire. The controlled potential power was supplied from a Yanaco Potentio/Garvanostatic Electrolyser VE-9 apparatus. Melting points were recorded on a Yanagimoto Micro Melting Point Apparatus and were uncorrected. Nmr spectra were measured with Varian XL 200 spectrometer with tetramethylsilane as an internal standard. Ir and uv spectra were measured with JASCO FT/IR 5300 and Hitachi 200-10 spectrophotometers, respectively. Ms spectra were measured with a Hitachi M-2000S spectrometer.

Electrolysis of 1a. A solution of 1a (590 mg, 2 mmol), tetrabutylammonium perchlorate (6840 mg, 20 mmol) in DMF (200 ml) was electrolyzed under a nitrogen stream at room temperayure at +0.6 V. After removing the solvent by distillation under a reduced pressure (62°C, 5 mmHg) the resulting residue was chromatographed on silica gel to give colorless crystals (2a) (150 mg, 28%, mp 140°C, lit., 7 mp 140°C, hexane-ethyl acetate (8:2)) and red crystals of tropone tosylhydrazone (110 mg, 13%, hexane-ethyl acetate (1:1)).

electrolysis of 1b. A solution of 1b (780 mg, 2 mmol), tetrabutylammonium perchlorate (6840 mg, 20 mmol) in DMF (200 ml) was electrolyzed at +1.05 V under the same reaction conditions as above to give brown crystals (3b) (130 mg, 17%) from slution with hexane-ethyl acetate (8:2) on silica-gel chromatography.

3b: mp 94-96°C. Hrms: m/z 348.0944. Calcd for C₂₀H₁₆N₂O₂S: m/z 348.0943. Ms n/z (rel intensity): 348 (M⁺, 100), 284 (63). Uv (MeOH): 239 nm (log & , 4.33), 273 (3.96), 276 (3.98), 293 (3.86), 330 (3.86). Ir (KBr): 3030, 2950, 1385, 1192, 1059 cm⁻¹. ¹H Nmr (CDCl₃) of 2.40 (s, 3H), 7.15-7.64 (m, 8H), 7.93-8.04 (m, 4H), 8.70 (s, 1H). ¹³C Nmr (CDCl₃) of 21.7, 120.2, 122.6, 124.3, 124.6, 127.1, 127.8, 128.4, 128.7, 128.8, 130.0, 130.1, 131.6, 133.6, 137.3, 146.3.

synthesis of 3b. To a solution of 4 (1740 mg, 10 mmol) and ethyl formate (1110 ng, 15 mmol) in anhydrous ether (40 ml) were added sodium metal (230 mg, 10 mmol) and one drop of ethanol. After stirring at room temperature for 24 h ethanol (1 ml) was added and the mixture was further stirred for 1 h. The reaction mixture was washed with water, and dried over anhydrous sodium sulfate. Evaporation of the solvent and separation of the residue with chromatography (silica gel, ether) afforded 2-oxo-3-phenylcyclohexanonecarbaldehyde (5) as a yellow oil (1790 mg, 19%).

is Hrms: m/z 202.0980. Calcd for $C_{13}H_{14}O_{2}$: m/z 202.0992. Ms m/z (rel intensity): 202 (M+, 100), 174 (56), 146 (35). Ir (oil): 3030, 2940, 1712 cm⁻¹. ¹H Nmr CDCl₃) 1.33-2.22 (m, 5H), 2.38-2.55 (m, 2H), 3.57-3.73 (m, 1H), 7.03-7.41 (m, iH), 8.85 (s, 1H). ¹³C Nmr (CDCl₃) 20.4, 23.2, 31.1, 47.2, 109.5, 126.5, 28.1, 128.2, 141.5, 182.9, 189.2.

o a solution of 5 (1410 mg, 7 mmol) in methanol (10 ml) was added hydrazine ydrate (350 mg, 7 mmol) dropwisely and the mixture was stirred at room temperature for 30 min. After evaporation of the solvent the residue was chromatoraphed (silica gel, hexane-ethyl acetate (3:2)) to afford colorless crystals of ,5,6,7-tetrahydro-7-phenyl-1H-indazole (6) (1260 mg, 91%).

6: mp 115-116°C. Hrms: m/z 198.1156. Calcd for C₁₃H₁₄N₂: m/z 198.1156. Ms m/z (rel intensity): 198 (M⁺, 100), 169 (54), 143 (18). Ir (KBr): 3159, 2928, 1493 cm⁻¹. ¹H Nmr (CDCl₃) of 1.62-2.32 (m, 5H), 2.50-2.68 (m, 2H), 3.88-4.07 (m, 1H), 7.04-7.38 (m, 6H). ¹³C Nmr (CDCl₃) of 20.4, 21.9, 33.9, 40.0, 115.9, 120.4, 120.4, 127.9, 128.4, 133.4, 143.4, 144.3.

A mixture of 6 (200 mg) and palladium-carbon (5%, 85 mg) in decalin (2.5 ml) was refluxed for 24 h. The reaction mixture was chromatographed (silica gel, hexane-ethyl acetate (3:2)) to give colorless crystals (7) (140 mg, 70%).

7: mp: $151-153^{\circ}$ C. Hrms: m/z 194.0833. Calcd for $C_{13}H_{10}N_2$: m/z 194.0843. Ms m/z (rel intensity): 194 (M⁺, 100), 167 (30). Uv (MeOH): 266 nm (log & , 3.98), 301 (4.06). Ir (KBr): 3258, 3030, 2950, 1429 cm⁻¹. ¹H Nmr (CDCl₃) $\stackrel{?}{0}$ 7.23-7.78 (m, 9H), 8.08 (s, 1H). ¹³C Nmr (CDCl₃) $\stackrel{?}{0}$ 119.9, 121.5, 124.6, 126.0, 127.7, 127.8, 127.9, 129.2, 135.3, 138.0, 138.8.

A solution of Z (17 mg, 0.09 mmol) and tosyl chloride (170 mg, 0.9 mmol) in pyridine (5 ml) was heated at 118°C for 2.5 h. The mixture was diluted with benzene, washed with water, and dried over anhydrous sodium sulfate. After filtration the solvent was removed on a rotary evaporator and the residue was chromatographed (silica gel, hexane-ethyl acetate (4:1)) to give brown crystals (3b) (14 mg, 46%).

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2-tosyl-2H-indazole (2a) has been reported to be formed in the reactions of opone tosylhydrazone or its sodium salt (1a) with silver chromate at 120°C.7 wev r, the similar rections on 2-phenyltropone tosylhydrazone or its sodium lt (1b) did not afford the corresponding products, 2-tosyl-7-phenyl-2H-indazole b) or 1-tosyl-7-phenyl-1H-indazole (3b), but gave 27% yield of 2,2'-diphenyl-ptafulvalene (11), which was formed by dimerization of the carbene generated by ermolysis of 1b.

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GI

AB Electrochem. oxidation of the sodium salts I (R = H, Ph, R1 = Na, R2 = tosyl) of tropone and 2-phenyltropone tosylhydrazones afforded 2-tosyl-2H-indazole II and 1-tosyl-7-phenyl-1H-indazole III (R2 = tosyl), resp. The reactions proceeded through the cyclization of the corresponding hydrazyl radicals generated by electrochem. one-electron oxidation of the hydrazone anions.

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(preparation and catalytic dehydrogenation of)

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CN 1H-Indazole, 4,5,6,7-tetrahydro-7-phenyl- (9CI) (CA INDEX NAME)

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RN 141037-88-9 CAPLUS

CN 1H-Indazole, 7-phenyl- (9CI) (CA INDEX NAME)

IT 141037-86-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 141037-86-7 CAPLUS

CN 1H-Indazole, 1-[(4-methylphenyl)sulfonyl]-7-phenyl- (9CI) (CA INDEX NAME)